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September 6, 2007

Mail Stop Appeal Brief – Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Applicant: Christian D. Hofstader et al.	**Examiner: Sajeda Muhebbullah**
Serial No.: 10/710,910	**Art Unit: 2174**
Filing Date: 08/12/2004	**Confirmation No.: 3967**
For: Screen Reader Having Concurrent Communication of Non-Textual Information	
Our Reference: 1589.10	

Dear Sir:

Enclosed please find the following:

1. Brief of Appelant having a Certificate of Mailing dated September 6, 2007;
2. U.S. Patent No. 6,085,161 to *MacKenty et al.;*
3. U.S. Patent No. 4,836,784 to *Burchart;*
4. U.S. Patent No. 5,572,625 to *Raman et al.;*
5. U.S. Patent No. 5,186,629 to *Rohen;*
6. U.S. Application Publication No. 2002/0105496 to *Giuliani et al.;*
7. Petition for Extension of Time for a period of one month under (37 C.F.R. 1.136(a));
8. Credit Card Payment form PTO-2038 in the amount of $310.00 for Appeal Brief and Extension of Time; and
9. Self-addressed, postage prepaid post card to serve as a receipt for items 1-8.

Very respectfully,

SMITH & HOPEN

By: Thomas E. Toner
tom.toner@smithhopen.com

TET/lr
Enclosures

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Date: **September 6, 2007**

Lauren Reeves

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No.	:	**10/710,910**	Confirmation No. **3967**
Applicant	:	**Christian D. Hofstader, et. al.**	
Filed:	:	**08/12/2004**	
TC/A.U.	:	**2174**	
Examiner	:	**Sajeda Muhebbullah**	
Docket No.	:	**1589.10PRC**	
Customer No. :		**21,901**	
For	:	**Screen Reader Having Concurrent Communication of Non-Textual Information**	

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313

BRIEF OF APPELANT

Sir/Madam:

    In furtherance of its appeal from the Non-Final Rejection mailed 6 March 2007, Applicant hereby submits its Appeal brief.

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HEADINGS   **PAGE NO.**

1. REAL PARTY IN INTEREST

The real party in interest is Freedom Scientific Inc., the assignee of record, which is a Delaware Corporation, organized under the laws of the State of Delaware, as evidenced by the assignment set forth at Reel 015374, Frame 0428.

2. RELATED APPEALS AND INTERFERENCES

None.

3. STATUS OF CLAIMS

Rejected claims:	1-24
Canceled claims:	None.
Withdrawn Claims:	None.
Claims under appeal:	1-24

4. STATUS OF AMENDMENTS

No amendments have been made subsequent to the non-final rejection by the Office dated March 6, 2007.

5. SUMMARY OF CLAIMED SUBJECT MATTER

Citations to the specification are by page and line number. A concise explanation of the invention defined in the claims involved in this appeal is provided below. Claims 1 and 17 are the only independent claims on appeal.

Claim 1 provides for a screen reader software, which communicates computer display information to an end user. (Application, page 22, lines 2-11). The screen reader's typical use is to read documents from a word processor (For examples, see Application, Figs. 8, 14, 17, 18, 21) or web browser program (For examples, see Application, Figs. 2-7) and provide information from the graphical interface and menu selections to the user. (For examples, see Application, Figs. 2-6, 14-17). The screen reader is linked to software on the computer, and both programs may run concurrently or one program may operate the other. The invention allows the screen reader to transmit non-textual information (See, Application, Figs. 2-21, as examples of non-textual information transmitted), including, as a non-exhaustive list, font format, font color, paragraph format, bulleting, numbering, borders, shading, column format, page and section breaks, tab setting, hyperlink settings, and graphical interface configuration. (See, Application, Figs. 9-12, 19). The reader also permits transmission of non-textual information, with the textual, to the user (Application, page 22, lines 4-5) via an audio interface or Braille device(s). (See, Application, Fig. 22).

Claim 17 also provides for a screen reader software, loaded on a personal computer, with the same elements as claim 1. (As amended in Amendment B, page 4, lines 18-19). The non-textual information is layered with the textual information communicated to the end user.

Claim 18 includes a screen reader, and elements of claims 1 and 17, but allows the end user to pre-select sounds and prerecorded digital audio to customize the audio transmission. (As amended in Amendment B, page 5, lines 10-27; See also, Figs. 3-6).

Claim 19 consists of the previous elements, but provides for concurrent output of textual and non-textual display information through audio or Braille display. (See, Application, Figs. 22, 23. As presented in Amendment B, page 6, lines 1-10).

6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

I.   Whether the Office erred in utilizing Raman et al. as prior art for 35 U.S.C. §103(a).

II.   Whether the Office erred in rejecting claims 1-9 and 17-23 under 35 U.S.C. §103(a) as being rendered obvious by Raman et al. in view of MacKenty et al. [1]

III.   Whether the Office erred in rejecting claims 10-16 and 24 under 35 U.S.C. §103(a) as being rendered obvious by Raman et al. in view of MacKenty et al. and Guiliani et al.[2], Burchart et al.[3], or Rohen et al.[4]

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[1] Non-Final Action, 3/06/07, page 2, 3
[2] Non-final Action, 3/06/07, page 5.
[3] Non-final Action, 3/06/07, page 7.
[4] Non-final Action, 3/06/07, page 7, 8.

7. <u>ARGUMENT</u>

I.   Raman does not teach a screen reader software as set forth in the claims.

"To establish [a] *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested in the prior art."[5]

The first page of the specification states:

> Typically, visual information is displayed upon a monitor screen and data can be added or manipulated via keystrokes upon an associated keyboard. Feedback is provided visually to the user by the monitor screen. Blind users cannot utilize the information appearing upon the monitor screen while visually impaired users may experience difficulty doing so. Accordingly, screen readers have been developed to assist blind and visually impaired users when they use a personal computer.

A screen reader is a system to transfer text-to-speech, that speaks or non-visually displays the content of a computer display.[6,7,8] The reader does not require an application or other document be converted to a different format prior to output whereas Raman does require a conversion of a source document. Only after the document is in a structured internal representation, is the output sent in audio format. However, a screen reader is manipulating the flow of data as it is output-ed to the screen.

The Office has misinterpreted the teachings of Raman. The Office construes Raman to teach screen reader software with a reader module, coupled to resident computer software, to obtain textual and non-textual display information, a broadcast module coupled to the reader module to "communicate the display information[,]" and a schema module coupled to the broadcast module to send textual and non-textual display information to an output device.[9] However, Raman teaches a method of conversion of a source document by a markup language. Thus, the output is an internal representation of the source document, and Raman's invention is considered "acoustical typesetting" of a source document.[10] Raman does not teach "A screen reader software product comprising a screen reader module communicatively coupled with resident software on a computer, the reader module adapted to collect textual and non-textual

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[5] See, MPEP 2143.03.

[6] The Free On-line Dictionary of Computing, © 1993-2005 Denis Howe, accessed on the internet via Dictionary.com on Thursday, November 03, 2005.

[7] See also http://www.umuc.edu/ade/glossary.html - "A screen reader is a software program that uses a synthetic voice to read a computer screen out loud. Computer users who are visually impaired or blind often use screen readers to navigate the Web. Two popular screen reader programs are JAWS for Windows and Window-Eyes."

[8] See also http://www.buffalostate.edu/offices/disabilityservices/glossary.htm defining screen reader as"a software/hardware system that allows a person with a visual or print impairment to attain access to printed material on a computer screen. Output for the user can be both tactile and/or auditory."

[9] Office Action dated March 6, 2007, page 2, paragraph 4.

[10] See, Raman at column 4, line 16.

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display information generated by the resident software ..." as required by the claim. Further, the Office concedes that "Raman does not explicitly teach the reader module to be a screen reader module."[11] Thus, Raman fails because Raman does not teach a screen reader module as required by the claims.

II. Raman et al. and MacKenty et al. are not appropriate invalidating references because Raman does not teach a screen reader software and MacKenty teaches away from screen reader software.

Claims 1-9 and 17-23 stand rejected under 35 U.S.C. §103(a), in light of Raman et al. ("Raman") and MacKenty et al. ("MacKenty"). A *prima facie* case of obviousness must be made to support a rejection under 35 USC §103(a). MPEP §2143 states:

> To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

In making the prima facie case "the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references."[12] References selected by the examiner must be considered holistically, including any parts that teach away from the invention[13], and it is inappropriate to combine references if the references teach away.[14] Finally, "all the claim limitations must be taught or suggested by the prior art."[15]

As discussed above, claims 1-9 and 17-23 are directed to "[a] screen reader software product comprising a screen reader module communicatively coupled with resident software on a computer..." Also, as discussed *supra*, Raman does not teach a screen reader. The Office has sought to establish a *prima facie* case of obviousness by relying on MacKenty for the missing element of the screen reader module. However, MacKenty fails to supply the element missing from Raman, namely the screen reader module. In fact, MacKenty explicitly states that its

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[11] Office Action dated March 6, 2007, page 2, paragraph 4.
12 See, MPEP 2143 citing Ex parte Clapp, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985).
[13] MPEP 2141.02(VI).
[14] MPEP 2145(X)(D)(2).
[15] MPEP 2143.03.

invention presents HTML documents to the user as a linear stream of audio information. The division of text into lines on a page used by visual representation of documents is avoided. *This differs from the existing systems, called "screen readers," that use synthesized speech output to represent information of a computer screen.* Such screen readers depend upon the screen layout of a document and require the user to understand and follow that layout to navigate within a document.[16]

Moreover, MacKenty teaches the weakness of screen readers suffer, resulting from the dependency on screen layout.[17] Because screen readers depend on layout, it forces visually-impaired users to adapt to the screen's layout to navigate a screen.[18] MacKenty does teach a system whereby a parser analyzes HTML code embedded in a web page and breaks the code into a hierarchal tree.[19] The HTML code is marked and enqued as a auditory sound.[20] The web page is read off in two parts, using a reading cursor and an enquing cursor.[21] On the other hand, a screen reader transfers visual data on a screen into auditory output. Thus, MacKenty does not teach a screen reader.

The Office rejected arguments, as unpersuasive, that MacKenty does not teach a screen reader.[22] The lines cited by the Office state that MacKenty teaches a method of making HTML pages accessible to the visually impaired[23], and a user may control the presentation of the information[24]. Further, the reading of the page "follow[s] the text the way a person would read it. This differs from visual representations of HTML documents[.]"[25] As discussed above, screen readers present display information through non-visual means, as it is presented on the display screen. As such, the information is presented in the same manner as the visual representation of the HTML page. Because MacKenty states, as cited by the Office, MacKenty's invention "differs from visual representations of HTML documents," whereas screen readers approximate visual representations of display information, including HTML documents, MacKenty cannot teach a screen reader.

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[16] U.S. Patent No. 6,085,161 to MacKenty at col. 1, line 47.
[17] U.S. Patent No. 6,085,161 to MacKenty at col. 1, line 47.
[18] U.S. Patent No. 6,085,161 to MacKenty at col. 1, lines 44-59
[19] MacKenty at col. 2, lines 48-52.
[20] MacKenty at col. 5, line13-17.
[21] MacKenty at col. 5, lines 23-35.
[22] Office Action dated March 6, 2007, page 8, paragraph 8.
[23] MacKenty at col. 1, lines 33-35. See, Office Action dated March 6, 2007, page 8, paragraph 8.
[24] MacKenty at col. 2, lines 18-30; col. 6 lines 58-60. See, Office Action dated March 6, 2007, page 8, paragraph 8.
[25] MacKenty at col. 5, lines 38-47. See, Office Action dated March 6, 2007, page 8, paragraph 8.

As such, MacKenty fails to supply the elements (recited in independent claims 1, and 17-19) missing from Raman as would be necessary to establish a *prima facie* case of obviousness. Dependent claims 2-9 and 20-23 are allowable as a matter of law through incorporation of limitations from one or more allowable base claims, namely claim 1 or 19. Further, one of skill in the art would not be motivated to adopt a screen reader based upon the drawbacks MacKenty purports the system possesses. Because MacKenty discusses the limitations of screen readers, it effectively teaches away from using a screen reader. Because the MPEP requires references to be viewed as a whole, and references cannot be cited against an invention if the reference teaches away from the invention, MacKenty cannot be used to invalidate the patent.

Furthermore, there is no reasonable expectation of success in the invention viewing the cited prior art, Raman and MacKenty. The modification or combination of prior art references is obvious only if there is some reasonable expectation of success.[26] Neither Raman nor MacKenty teach the screen reader software. Moreover, MacKenty expressly chose not to use a screen reader because it limits information presentation to a visual layout[27] and forces the user to adapt to the screen's layout to navigate a screen.[28] The cited references do not address or suggest a method to overcome these shortcomings. Further, the cited references do not disclose a method to successfully integrate the display's textual information with the non-textual information. This is especially true, given that the screen reader transmits the display's visual information through auditory means, and does not use MacKenty's method of disregarding the visual layout of the screen. Hence, neither MacKenty nor Raman provide a reasonable expectation of success.

Additionally, Raman and MacKenty cannot be combined to create a functional invention, for the purposes of 35 U.S.C. § 103(a). The proposed modification cannot render the invention "unsatisfactory for its intended purpose."[29] MacKenty states that the screen readers are not suitable for communication with the visually impaired because such systems depend on screen layout and require a user to adapt to the screen's layout.[30] The current invention uses a screen reader to transmit information to the end user. The proposed modification is to add a

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[26] See, MPEP 2143.02.
[27] U.S. Patent No. 6,085,161 to MacKenty at col. 1, line 47.
[28] U.S. Patent No. 6,085,161 to MacKenty at col. 1, lines 44-59
[29] MPEP 2143.01(V).
[30] MacKenty at paragraph col. 1, lines 44-59.

screen reader to MacKenty, which MacKenty expressly states is unsatisfactory, as discussed *supra*. Therefore, MacKenty is not an appropriate source to invalidate the current application's claims.

It is therefore respectfully requested that rejection of claims 1-9 and 17-23 under 35 U.S.C. 103(a) as being unpatentable over Raman in view MacKenty be reversed..

III. Raman and MacKenty are not appropriate invalidating references and Guiliani et al., Burchart et al., and Rohen et al. do not teach a screen reader software.

A statement that the invention was within ordinary skill of art because references teach all aspects is not sufficient to show a prima facie case of obviousness.[31]

Claims 10-13, 15 and 24 stand rejected under 35 U.S.C. 103(a) based on the teachings of Raman et al. ("Raman"), MacKenty et al. ("MacKenty"), and Giuliani et al. (U.S. Pub. No. 2002/0105496) ("Giuliani"). Claim 14 stands rejected as unpatentable over Raman, MacKenty, and Burchart et al. (U.S. Patent. No. 4,836,784) ("Burchart"). The Office found claim 16 unpatentable over Raman, MacKenty, and Rohen (U.S. Patent No. 5,186,629).

In support, the Office stated that Raman and MacKenty teach the output of textual and non-textual display information, but do not teach the output of such information to a Braille device.[32] However, Guiliani teaches the transfer of display information to a Braille device.[33] Burchart teaches the transfer of display information to two Braille devices,[34] and Rohen instructs on the use of speech synthesizers and vibratory apparatus to broadcast visual information to visually-impaired users[35]. Therefore, according to the Office, it would be obvious to combine the references and develop the current invention.[36]

Claims 10-13, 15 and 24 and 27 are dependent upon either independent claim 1 or 17. Raman teaches acoustical typesetting of a source document, but does not teach a screen reader, which uses display information to create auditory output. MacKenty explicitly states it does not use a screen reader, and that screen readers depend on screen layout, hampering the

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[31] MPEP 2143.01(IV).
[32] Office Action dated March 6, 2007, page 5.
[33] Office Action dated March 6, 2007, page 6.
[34] Office Action dated March 6, 2007, page 7
[35] Office Action dated March 6, 2007, page 8.
[36] Office Action dated March 6, 2007, pages 6-8.

effectiveness of such systems. For these reasons, as enunciated above in further detail, Raman and MacKenty are inappropriate prior art references.

Guiliani does not discuss a screen reader, but only an output device based on Braille. Burchart only teaches the use of two Braille output devices, not a screen reader. Therefore, neither claim 1 nor 17, 18, or 19 are obviated. Consequently, the Guiliani and Burchart patents fail to resolve the deficiencies in combining Raman and MacKenty, and neither claim 1 nor 17 are obvious. Because the independent claim is not obvious, the dependent claim, 10-13, 14, 15, 24, and 27, are patentable. Claim 16, dependent upon independent claim 1, also stands unpatentable using Raman, MacKenty, and Rohen. Rohen also fails to teach "a screen reader module communicatively coupled with resident software on a computer, the reader module adapted to collect textual and non-textual display information generated by the resident software..." Consequently, the Rohen patent also fails to resolve the deficiencies of the combination of Raman and MacKenty. Claim 16 is therefore patentable over Raman and MacKenty in view of Rohen.

Also, the Office did not address the reasonable expectation of success, an essential requirement in establishing a prima facie case[37]. As discussed above, Raman and MacKenty do not provide an expectation of success, as the references do not teach the use of a screen reader or address methods of circumventing the perceived shortcomings of such screen readers. The addition of Guiliani, the use of a Braille display, still does not provide a reasonable expectation of success. Nor does the addition of Burchart's two Braille devices provide a reasonable expectation of success. The issue of integrating the textual information and non-textual information, as it is displayed on a screen, still remains unresolved by the references. Further, the addition of a speech synthesizer, as taught by Rohen, also does not resolve the issue integration of textual information and non-textual information, as it is displayed on a screen. As such, the references have not provided a reasonable expectation of success.

It is therefore respectfully requested that the rejection of claims 10-13,14, 15, 16 and 24 under 35 U.S.C. 103(a) be reversed.

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[37] See, MPEP 2143.

8. <u>CLAIMS APPENDIX</u>

Serial No: 10/710,910
Filed: 12 August 2004
Title: Screen Reader Having Concurrent Communication of Non-Textual Information

REJECTED CLAIMS

1. A screen reader software product comprising:

a screen reader module communicatively coupled with resident software on a computer, the reader module adapted to collect textual and non-textual display information generated by the resident software;

a broadcast module communicatively coupled to the reader module, the broadcast module adapted to communicate the display information collected by the reader module to an output device; and

a schema module communicatively coupled to the broadcast module, the schema module adapted to send non- textual display information with associated textual display information to the output device in substantially concurrent fashion.

2. The software product of claim 1 wherein the output device is a speech synthesizer.

3. The software product of claim 2 wherein the non-textual display information is selected from the group consisting of font format, paragraph format, bulleting, numbering, borders, shading, column format, page breaks, section breaks, tab settings, table structure, image data, case settings, comment field locations, hyperlink settings, data entry forms, and graphic user interface configuration.

4. The software product of claim 2 wherein the schema module modifies the broadcast of the textual display information to communicate the non-textual display information by altering characteristics of the speech synthesizer, the characteristics selected from the group consisting of pitch, speed, volume, emphasis, simulated gender, simulated accent, simulated age, and pronunciation.

5. The software product of claim 2 wherein the schema module includes an additional audio output layer to the broadcast of the textual display information to audibly

communicate the non-textual display information in substantially concurrent fashion with the synthesized text.

6. The software product of claim 5 wherein the additional audio output layer broadcasts a pre-selected sound associated with the non-textual display information.

7. The software product of claim 6 wherein the pre-selected sound is end-user-definable.

8. The software product of claim 6 wherein pre-selected sound is selected from the group consisting of dynamically generated sound and prerecorded digital audio.

9. The software product of claim 2 wherein the schema module includes a plurality of additional audio outputs layer to the broadcast of the textual display information to audibly communicate a corresponding plurality of non-textual display information in substantially concurrent fashion with the synthesized text.

10. The software product of claim 1 wherein the output device is a Braille display.

11. The software product of claim 10 wherein the non-textual display information is selected from the group consisting of font format, paragraph format, bulleting, numbering, borders, shading, column format, page breaks, section breaks, tab settings, table structure, image data, case settings, comment field locations, hyperlink settings, data entry forms, and graphic user interface configuration.

12. The software product of claim 11 wherein the schema module modifies the broadcast of the textual display information to communicate the non- textual display information by altering tactile characteristics of the Braille display.

13. The software product of claim 12 wherein the tactile characteristics of the Braille displayed modified by the schema module are selected from the group consisting of display speed, pin protrusion level, pin retraction level and pin vibration.

14. The software product of claim 1 wherein the output device is an array of two Braille displays, a first Braille display outputs textual display information and a second Braille display outputs non-textual display information in substantially concurrent fashion.

15. The software product of claim 1 wherein the output device is an array of a speech synthesizer and a Braille display, the speech synthesizer audibly broadcasts textual display information and the Braille display tactically outputs non-textual display information in substantially concurrent fashion.

16. The software product of claim 1 wherein the output device is an array of a speech synthesizer and a vibratory apparatus, the speech synthesizer audibly broadcasts textual

display information and the vibratory apparatus vibrates at pre-selected frequencies responsive to non-textual display information in substantially concurrent fashion.

17. A screen reader software product comprising:

a screen reader module communicatively coupled with resident software on a personal computer, the reader module adapted to collect textual and non-textual display information generated by the resident software, the non-textual display information is selected from the group consisting of font format, paragraph format, bulleting, numbering, borders, shading, column format, page breaks, section breaks, tab settings, table structure, image data, case settings, comment field locations, hyperlink settings, data entry forms, and graphic user interface configuration[[.]];

a broadcast module communicatively coupled to the reader module, the broadcast module adapted to communicate the display information collected by the reader module to speech synthesizer; and

an end-user-definable schema module communicatively coupled to the broadcast module, the schema module adapted to send non-textual display information with associated textual display information to the output device in substantially concurrent fashion whereby the schema module modifies the broadcast of the textual display information to communicate the non-textual display information by altering characteristics of the speech synthesizer, the characteristics selected from the group consisting of pitch, speed, volume, emphasis, simulated gender, simulated accent, simulated age, and pronunciation.

18. A screen reader software product comprising:

a screen reader module communicatively coupled with resident software on a personal computer, the reader module adapted to collect textual and non-textual display information generated by the resident software, the non-textual display information is selected from the group consisting of font format, paragraph format, bulleting, numbering, borders, shading, column format, page breaks, section breaks, tab settings, table structure, image data, case settings, comment field locations, hyperlink settings, data entry forms, and graphic user interface configuration[[.]];

a broadcast module communicatively coupled to the reader module, the broadcast module adapted to communicate the display information collected by the reader module to speech synthesizer; and

an end-user-definable schema module communicatively coupled to the broadcast module, the schema module adapted to send non-textual display information with associated textual display information to the output device in substantially concurrent fashion whereby the schema module includes an additional audio output layer to the broadcast of the textual display information to audibly communicate the non-textual display information as an end-user-definable a pre-selected sound selected from the group consisting of dynamically generated sound and prerecorded digital audio in substantially concurrent fashion with the synthesized text.

19. A screen reader software product comprising:

a screen reader module communicatively coupled with resident software on a computer, the reader module adapted to collect textual and non-textual display
information generated by the resident software;

a broadcast module communicatively coupled to the reader module, the broadcast module adapted to communicate the display information collected by the reader module to an output device; and

an end-user-definable schema module communicatively coupled to the broadcast module, the schema module adapted to send non-textual display information with associated textual display information to the output device in substantially concurrent fashion.

20. The software product of claim 19 wherein a plurality of end-user schema definitions are assignable to specific resident software applications.

21. The software product of claim 19 wherein end-user schema definitions generated by an end user are shareable with other users.

22. The software product of claim 19 wherein the non-textual display information is selected from the group consisting of hyperlink settings, data entry forms, and graphic user interface configuration.

23. The software product of claim 19 wherein the non-textual display information is style information.

24. The software product of claim 23 wherein the style information is selected from the group consisting of bold, italics, underline and font color.

9. EVIDENCE APPENDIX

Exhibit A: Denis Howe, The Free On-line Dictionary of Computing, http://www.Dictionary.com (accessed Tuesday, August 14, 2007).

Exhibit B: Unknown author, *University of Maryland University College's Accessibility in Distance Education,* http://www.umuc.edu/ade/glossary.html (accessed Tuesday, August 14, 2007).

Exhibit C: Unknown author, *Buffalo State University of New York's Glossary,* http://www.buffalostate.edu/offices/disabilityservices/glossary.htm (accessed Tuesday, August 14, 2007).

10. RELATED PROCEEDINGS APPENDIX

None

CONCLUSION

Applicant respectfully submits that the various rejections of claims 1-24 under 35 U.S.C. §103(a) are improper and should be withdrawn. Fairness to Applicant requires reversal of the non-final rejection; therefore, such reversal is solicited.

Very respectfully,

SMITH & HOPEN, P.A.

By:

USPTO Reg. No. 57,422
Dated: September 6, 2007
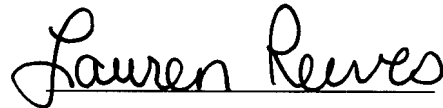
Thomas E. Toner
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Attorneys for Appellant

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I HEREBY CERTIFY that this Appeal Brief is being deposited with the United States Postal Service as "Express Mail Post Office to Addressee Mailing Label No. EV936505861US, addressed to: Mail Stop Appeal Brief - Patents, Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450 on. September 6, 2007.

Lauren Reeves

Exhibit A

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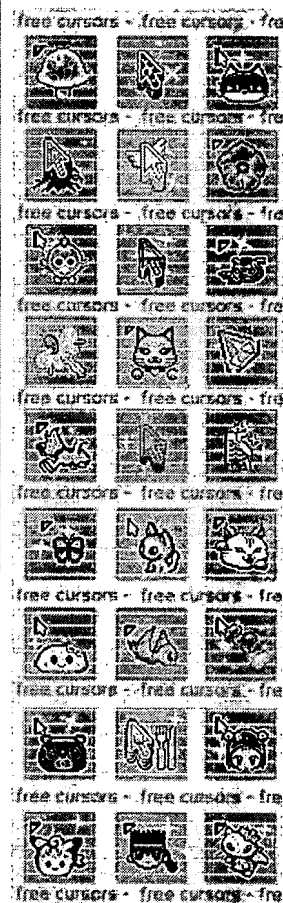**screen reader** *application*
A text-to-speech system, intended for use by blind or low-vision users, that speaks the text content of a computer display.
(1998-10-19)

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Exhibit B

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ADE Glossary

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A-Prompt	A-Prompt, or "Accessibility Prompt," is a software tool that evaluates Web pages for accessibility problems and suggests revisions. The software can be downloaded for free from the ⊞A-Prompt Web site.
Accessibility evaluator	An accessibility evaluator tests your Web site for compliance with accessibility standards. There are several accessibility evaluators available online for free or for purchase. Free accessibility evaluators include ⊞The Wave and ⊞A-Prompt. For-purchase accessibility evaluators include ⊞Bobby and ⊞Ramp.
Adobe PDF	Adobe PDF, or "Portable Document Format," is commonly used on the Web to format downloadable documents. Adobe PDFs allow you to retain complex document formatting and pagination not possible in HTML. Adobe Acrobat software is required to create PDFs. Acrobat Reader software is required to open and read PDFs. Acrobat Reader can be downloaded for free from the ⊞Adobe Acrobat Web site.
Alternative text, text equivalent, or "alt text"	Alternative text, or "alt text," is a replacement for an image that serves the same purpose as the image itself. It is read by a screen reader in place of the image. Alt text is not a description of the image, but a functional equivalent. More information about alt text can be found in the ⊞How To: Images section of this Web site.
Assistive technology	Assistive technology is hardware or software that helps a person use the computer. Assistive technologies include screen reader software (provides an aural translation of the information on the screen), voice recognition software (allows people to navigate with voice rather than a keyboard or mouse), and many input devices such as large keyboards and mouse pedals.
Audio description	An audio description is a verbal statement of on-screen visuals, usually inserted between dialogue. For example, the dialogue might consist of a character stating, "I'm king of the world!" and the audio description—spoken by a different, neutral voice—would say, "He stands on the bow of the ship, arms outstretched."
Braille display	Braille displays create a tactile translation of information on a computer screen. Some Braille displays have a reusable, refreshable surface, composed of rounded pins that rearrange to translate information as it is selected on screen.

Captions	Captions are a text version of video narrative and are synchronized with the images on screen.
Cascading Style Sheets (CSS)	Cascading Style Sheets, or CSS, are a series of instructions that specify how text should appear on a Web page. You can use CSS to set styles for text, borders, and other elements, and apply these styles to your entire Web site.
Cerebral palsy	Cerebral palsy is a condition that affects muscle control.
Course management system	A course management system is a tool that allows instructors, universities, and corporations to develop and support online education. UMUC WebTycho, Blackboard, and WebCT are all course management systems.
Dragon Dictate or Dragon NaturallySpeaking	Dragon NaturallySpeaking is voice recognition software. It is an assistive technology that allows a person to control the computer by voice, rather than by a keyboard or mouse.
Duchenne Muscular Dystrophy	Duchenne Muscular Dystrophy is a gene-related disorder that affects muscle control.
Flash	Macromedia Flash is a graphics and animation program. Flash poses accessibility challenges for screen reader users and people who use the keyboard to navigate.
Font	"Font" is used to describe the typeface, size, style, and spacing of text.
Font face	The typeface of text. Common font faces include Arial, Times New Roman, and Courier New.
Frames	Frames divide the browser into separate panes that contain different HTML pages. Clicking a link in one frame can change any other frame or open a new window.
HTML	HTML stands for **HyperText Markup Language**. It is a computer language used to create materials (e.g. text, graphics, sound, video, links) for display on the World Wide Web. Many programs, including Netscape Composer, Microsoft FrontPage, and Macromedia Dreamweaver, allow you to create Web pages even if you don't know HTML.
HTML attribute	An HTML attribute is used in tandem with an <u>HTML tag</u>. The attribute further defines the properties of the HTML tag. For example, the <table> tag has several attributes including align, border, height, width, cellpadding, and cellspacing. Attributes appear within the table tag and must be set to a value (for example, <table width="98%">).
HTML tag	HTML includes a series of text "tags" that describe how a Web page is formatted. Each tag appears inside brackets (<>). For example, the tag is used to create bold text. **HTML written like this:** This is how to create bold text. **Appears like this on your web page:** This is how to create **bold** text.
HTML validator	An HTML validator is an online tool that checks your Web page or site

	to make sure all of the HTML code meets standard specifications. HTML that is "valid" displays correctly in most browsers.
Hyperlink; hypertext link	Hyperlinks are text, images, or files that you click to open another Web page. Most hyperlinks appear as underlined and/or colored text on a Web page.
JavaScript	JavaScript is a programming language used to create interactive Web pages. For example, images that change or highlight when you "roll over" them with a mouse are commonly programmed with JavaScript.
JAWS	JAWS for Windows is a popular screen reader software program. It uses a synthetic voice to read a computer screen out loud.
Learning styles	Learning styles are the preferred ways by which people learn. Common learning styles include visual, auditory, and tactile (hands-on).
Legacy browser	A legacy browser is an older version of a Web browser—for example, Netscape 3 and Internet Explorer 3 are both considered legacy browsers.
Long descriptions	A long description is an alternate, accessible description of information contained in a complex illustration. For example, a graph, chart, or map may be summarized in a text-based, accessible data table. More information about long descriptions can be found in the ⌨How To: Images section of this Web site.
Lynx	Lynx is a text-only Web browser. It does not display graphics. To contrast, Internet Explorer and Netscape Navigator are graphical Web browsers (they show both graphics and text).
Media player	Students view online audio and video through a "media player." The three most popular media players are ⌨QuickTime, ⌨RealOne, and ⌨Windows Media Player. Media players usually include control buttons (play, pause, volume, etc.). They may also display captions or other text (if available). Different media players provide varied levels of accessibility.
MP3	MP3 is an audio file format, based on MPEG (Moving Picture Expert Group) technology. It creates very small files suitable for streaming or downloading over the Internet.
MPEG	MPEG (Moving Picture Expert Group) is a digital video file format.
Multi-sensory approach	A multi-sensory approach helps to address the needs of students with different learning styles. Content is presented in various ways—aural, visual, and experiential—to meet the needs of different students.
Pointer wand	A pointer wand is an assistive technology worn on the head and is used in place of a mouse. Web users who do not have use of their hands or arms may use a pointer wand to navigate a Web site.
Point size	Point size refers to the size of text, specified by a number such as 10 point or 22 point. Point sizes are said to be "absolute." This may pose problems for users who need to enlarge the text size to make it easier

to read. As a result, <u>relative units</u> are recommended instead of point sizes.

Relative units

Relative units are comparative sizes, specified by a descriptor such as smaller, larger, or a percentage. They are adaptable to different browser settings.

Repetitive Stress Syndrome

Repetitive Stress Syndrome is an injury to the musculoskeletal system. Carpal tunnel syndrome is common form of repetitive stress syndrome.

Screen enlarger

A screen enlarger, or screen magnifier, increases the size of text and graphics to make them more legible.

Screen reader

A screen reader is a software program that uses a synthetic voice to read a computer screen out loud. Computer users who are visually impaired or blind often use screen readers to navigate the Web. Two popular screen reader programs are JAWS for Windows and Window-Eyes.

Script

A script is a piece of programming code that makes something happen on screen.

Section 508

Section 508 (the 1998 Amendment to Section 508 of the Rehabilitation Act) requires the federal government to make all goods and services—including Web pages—fully accessible. It identifies specific standards for Internet and Web accessibility, which are often used as a basis for evaluating whether or not Web sites meet accessibility requirements.

Swing classes

The Java Foundation Classes by Sun—also known as "Swing"—provide Java programmers with an accessible framework for building applications. This means that Java programmers are taught to encode into Java applets all the information necessary for operation with screen readers and other assistive technologies.

Switch

Switches are used by people with mobility impairments who cannot use a standard keyboard. Users operate the switch by tapping or squeezing it. A switch has two modes: on and off. A pattern of on/off clicks allows people to work with a computer. Although a switch supports basic keyboard commands, it does not allow users to control a mouse.

Synchronized Accessible Media Interchange (SAMI)

Synchronized Accessible Media Interchange (SAMI) is a markup language developed by Microsoft. It can be used to synchronize captions and audio descriptions with online video. SAMI is supported only by Windows Media Player and other Microsoft products.

Synchronized Multimedia Integration Language (SMIL)

Synchronized Multimedia Integration Language (SMIL) is a markup language developed by the Word Wide Web Consortium (W3C). It can be used to synchrronize captions and audio descriptions with online video. SMIL is supported by the greatest number of media players, including RealOne and recent versions of QuickTime. Windows Media Player does not support SMIL.

Transcript

A transcript is a written account of spoken text, much like the text of a play, or a written interview. Television shows and legal courts often

make transcripts available to the public.

Uhthoff's Syndrome   Uhthoff's syndrome is a temporary blurriness or loss of vision caused by an increase in temperature. It is often associated with Multiple Sclerosis.

Virtual cursor   The Virtual Cursor is a method of navigating without a mouse. A series of keyboard commands are used to mimic mouse movement across the screen.

Voice recognition software   Voice recognition software translates voice commands and is used in place of a mouse and keyboard. Web users who do not have use of their hands or arms may use voice recognition software to navigate a Web site. Dragon NaturallySpeaking is a popular voice-recognition software program.

W3C standards   The ⊞World Wide Web Consortium (W3C) is a recognized Web standards group. It develops and publishes specifications, software, guidelines, and tools for the Web, including HTML and accessibility standards.

WAV   WAV is an audio file format. WAV files can be played in any Windows sound application (Windows 95 and later).

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Exhibit C

Accommodation - the adjustments including reasonable modifications to rules, policies, or practices; environmental adjustments such as the removal of architectural, communication, and transportation barriers, or auxiliary aids, and services. Examples of accommodations include, but are not limited to: alternative testing, extended time, scribe, interpreter, environment free of distractions, Braille material, taped lectures, and computer-assisted instruction. (University of Wisconsin System Policy on Individuals with Disabilities.)

American with Disability Act 1990 (ADA) - creates broad civil rights protection for people with disabilities, modeled after the Civil Rights Act 1964, and Section 504 of the Rehabilitation Act of 1973 as amended.

Assistive Technology - any item, piece of equipment, or product system, whether acquired commercially or off the shelf, modified, or customized, that is used to increase, maintain, or improve functional capabilities of individuals with disabilities.

Educational Technology - includes all components of informational technology used in the delivery of educational materials.

Informational Technology - any equipment or inter-connected system or subsystem of equipment that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission or reception of data or information.

Input Device - a device that allows the user of a system to enter information into a system such as a computer. This can be via alternative modalities.

OCR - Office of Civil Rights of the United States Department of Education.

Output Device - a system that provides the user with visual, tactile or auditory feedback.

Person with a Disability - someone who has a physical or mental impairment that substantially limits that person in some major life activity, has a record of such impairment, or is regarded as having such impairment.

Qualified Individual - someone who (with or without accommodation) meets the essential eligibility requirements for participating in programs. services, and activities provided by the university. (University of Wisconsin System Policy on Individuals with Disabilities.)

Rehabilitation Act 1973 as amended - Title V (particularly Section 503 and 504) forbids discrimination on the basis of disability in programs receiving Federal funds. Language used is parallel to the Civil Rights Act of 1964: people with disability were confirmed as a protected class in Civil Rights Restoration Act of 1988.

Screen Reader - a software/hardware system that allows a person with a visual or print impairment to attain access to printed material on a computer screen. Output for the user can be both tactile and/or auditory.

Universal Design - the design and production of products that promote equal opportunity for use by individuals with or without disability.

Voice Recognition - an electronic software/hardware system that can be trained to recognize an individual's voice patterns to allow for an alternative means of computer input replacing the keyboard.

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